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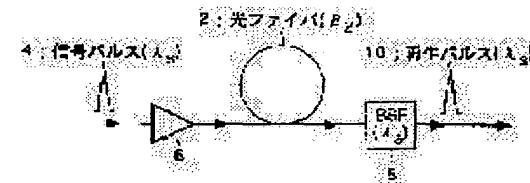
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## (54) METHOD, DEVICE AND SYSTEM FOR REPRODUCING OPTICAL SIGNAL

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a reproducing method of optical signal which does not depend on the bit rate and the pulse shape or the like of optical signal or a reproducing method of optical signal which is suitable for a WDM(wavelength dividing and multiplexing) as to method, device and system for reproducing optical signal.

**SOLUTION:** In this method for reproducing optial signal, when an optical signal is inputted to an optical waveguide structure (for example, an optical fiber) providing a nonlinear effect, a chirping is generated in the optial signal by the nonlinear effect. Then, components in which the chirping is small are eliminated by supplying the output optical signal outputted from the optical waveguide structure to an optical filter. When components in which the chirping is small are eliminated in the pulse shaped optical signal, since especially intensity fluctuation and accumulative noise of the top parts and/or low-power parts of the pulses can be eliminated, the optical signal can be reproduced without depending on the bit rate and the pulse shape or the like of the optical signal.



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